AMENDMENTS TO THE CLAIMS
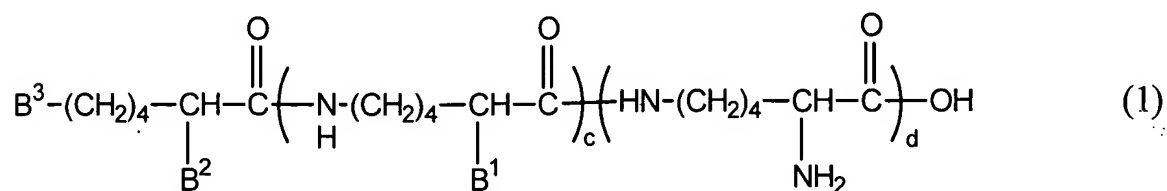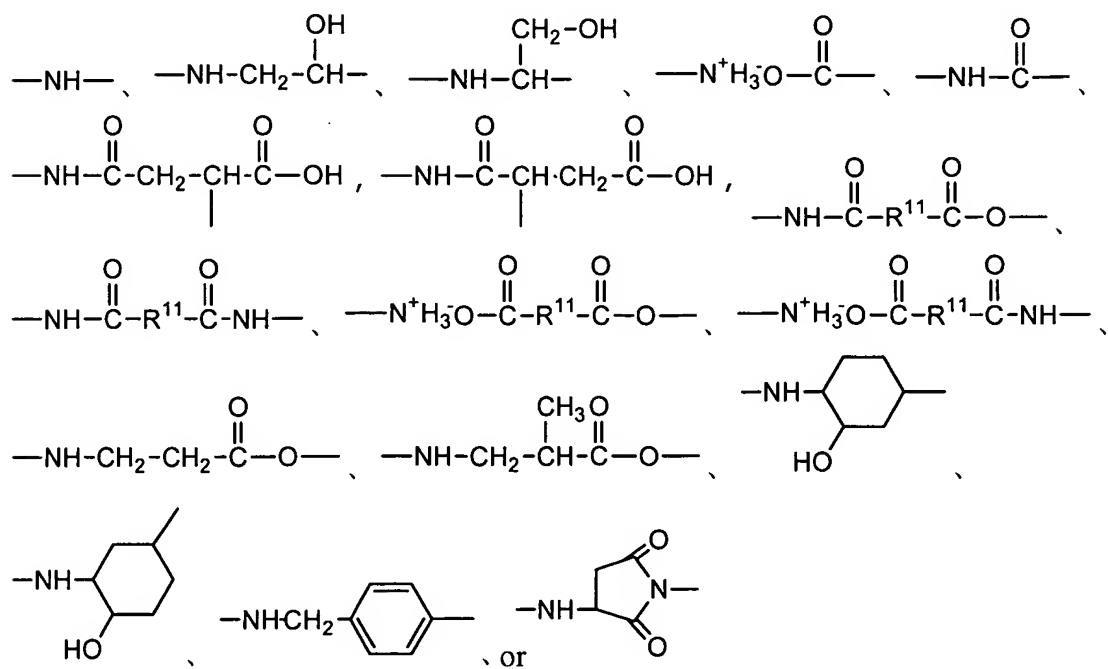
1. **(Currently amended)** ε-Polylysine represented by the following formula (1), having a polyorganosiloxane group introduced into the molecule (a polymer hereinafter referred to as "silicone-modified ε-polylysine")ε-polylysine").

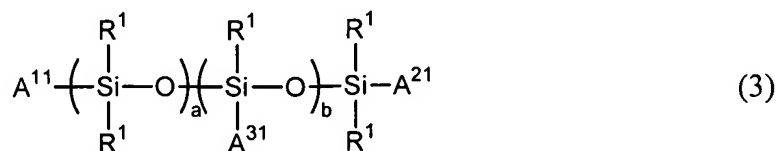$$B^3-(CH_2)_4-CH-C\left(-N-(CH_2)_4-CH-C\right)_c\left(-HN-(CH_2)_4-CH-C\right)_d-OH \qquad (1)$$

with B² on the first CH, H on the N, B¹ on the middle CH, and NH₂ on the last CH, each C bearing a =O (carbonyl).

wherein B^1, B^2 and B^3 are groups represented by general formula (2) below or amino groups, and at least one thereof is a group represented by formula (2), c is an integer of 0 to 50, d is an integer of 0 to 50, and c + d is an integer of 1 to 50.50

-D-Y-Q (2)

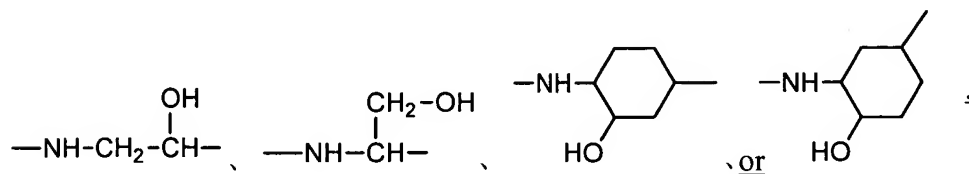wherein D is a group represented by:

$$-NH-, \quad -NH-CH_2-\overset{OH}{\underset{}{CH}}-, \quad -NH-\overset{CH_2-OH}{\underset{}{CH}}-, \quad -N^+H_3O-\overset{O}{\underset{}{C}}-, \quad -NH-\overset{O}{\underset{}{C}}-,$$

$$-NH-\overset{O}{\underset{}{C}}-CH_2-\overset{O}{\underset{}{CH}}-\overset{}{\underset{}{C}}-OH, \quad -NH-\overset{O}{\underset{}{C}}-CH\cdot CH_2-\overset{O}{\underset{}{C}}-OH, \quad -NH-\overset{O}{\underset{}{C}}-R^{11}-\overset{O}{\underset{}{C}}-O-,$$

$$-NH-\overset{O}{\underset{}{C}}-R^{11}-\overset{O}{\underset{}{C}}-NH-, \quad -N^+H_3O-\overset{O}{\underset{}{C}}-R^{11}-\overset{O}{\underset{}{C}}-O-, \quad -N^+H_3O-\overset{O}{\underset{}{C}}-R^{11}-\overset{O}{\underset{}{C}}-NH-,$$

$$-NH-CH_2-CH_2-\overset{O}{\underset{}{C}}-O-, \quad -NH-CH_2-\overset{CH_3\ O}{\underset{}{CH}}-\overset{}{\underset{}{C}}-O-, \quad -NH-\langle cyclohexyl,\ HO \rangle-$$

$$-NH-\langle methylcyclohexyl,\ HO \rangle, \quad -NHCH_2-\langle phenyl \rangle-, \quad -NH-\langle succinimidyl \rangle\ \text{or}$$

2

~~wherein~~ (wherein R^{11} is C1-5 linear or branched alkylene, C2-5 alkenylene or C6-10 arylene),

and Y is C1-1000 linear or branched alkylene, of which any mutually non-adjacent methylenes

may be substituted with -O-, and Q is a polyorganosiloxane group represented by the following
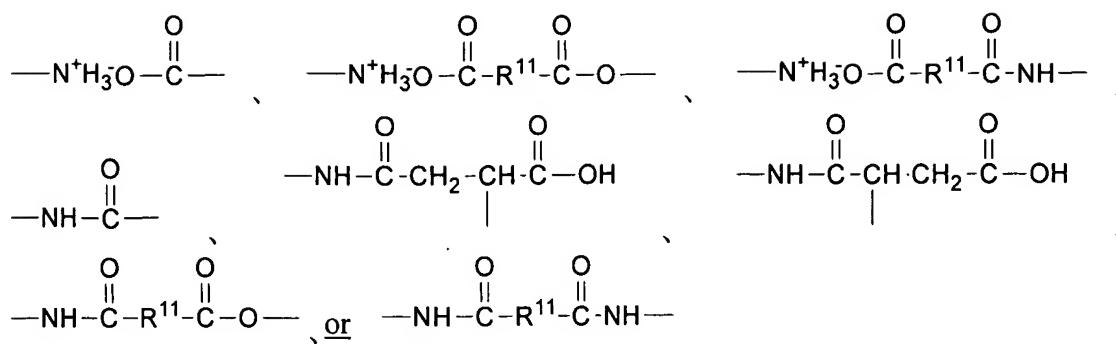
formula (3):

$$A^{11}\left(\!\begin{array}{c}R^1\\|\\Si-O\\|\\R^1\end{array}\!\right)_a\!\!\left(\!\begin{array}{c}R^1\\|\\Si-O\\|\\A^{31}\end{array}\!\right)_b\!\!\begin{array}{c}R^1\\|\\Si-A^{21}\\|\\R^1\end{array} \qquad (3)$$

wherein each R^1 is independently C1-20 alkyl or C6-10 aryl, a is an integer of 0 to 1000, b is an

integer of 0 to 1000, a + b is an integer of 1 to 1000, and A^{11}, A^{21} and A^{31} are independently R^1, a

monovalent residue which is a compound represented by formula (1) with Q removed, or a single

bond, with one thereof being a single bond that is combined with Y.

2. **(Currently amended)** Silicone-modified ε-polylysine according to claim 1, wherein D in

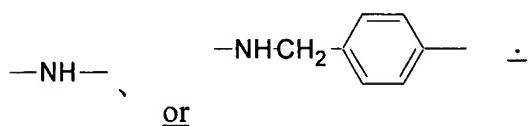formula (2) is one of the following ~~groups.~~groups

3. **(Currently amended)** Silicone-modified ε-polylysine according to claim 1, wherein D in

formula (2) is one of the following ~~groups.~~groups

$$-N^{+}H_3O-\overset{\overset{\displaystyle O}{\parallel}}{C}-$$ `,` $$-N^{+}H_3O-\overset{\overset{\displaystyle O}{\parallel}}{C}-R^{11}-\overset{\overset{\displaystyle O}{\parallel}}{C}-O-$$ `,` $$-N^{+}H_3O-\overset{\overset{\displaystyle O}{\parallel}}{C}-R^{11}-\overset{\overset{\displaystyle O}{\parallel}}{C}-NH-$$ `,`

$$-NH-\overset{\overset{\displaystyle O}{\parallel}}{C}-$$ `,` $$-NH-\overset{\overset{\displaystyle O}{\parallel}}{C}-CH_2-\underset{\mid}{CH}-\overset{\overset{\displaystyle O}{\parallel}}{C}-OH$$ `,` $$-NH-\overset{\overset{\displaystyle O}{\parallel}}{C}-\underset{\mid}{CH}\cdot CH_2-\overset{\overset{\displaystyle O}{\parallel}}{C}-OH$$ `,`

$$-NH-\overset{\overset{\displaystyle O}{\parallel}}{C}-R^{11}-\overset{\overset{\displaystyle O}{\parallel}}{C}-O-$$ `,` <u>or</u> $$-NH-\overset{\overset{\displaystyle O}{\parallel}}{C}-R^{11}-\overset{\overset{\displaystyle O}{\parallel}}{C}-NH-$$
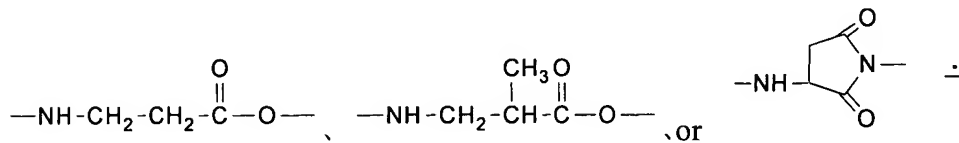
wherein R^{11} is C1-5 linear or branched alkylene, C2-5 alkenylene or C6-10 arylene.

4.   **(Currently amended)** Silicone-modified ε-polylysine according to claim 1, wherein D in formula (2) is one of the following ~~groups.~~<u>groups</u>
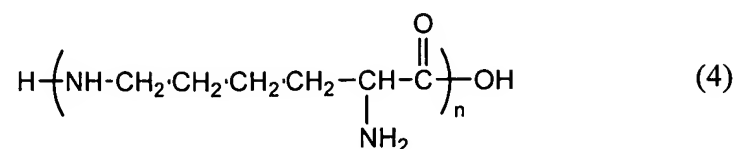
$$-NH-$$ `,` <u>or</u> $$-NHCH_2-\langle\!\!\!\bigcirc\!\!\!\rangle-$$ `÷`

5.   **(Currently amended)** Silicone-modified ε-polylysine according to claim 1, wherein D in formula (2) is one of the following ~~groups.~~<u>groups</u>

$$-NH-CH_2-CH_2-\overset{\overset{\displaystyle O}{\parallel}}{C}-O-$$ `,` $$-NH-CH_2-\underset{\mid}{\overset{\displaystyle CH_3}{CH}}-\overset{\overset{\displaystyle O}{\parallel}}{C}-O-$$ `,`<u>or</u> $$-NH-\langle\text{succinimidyl}\rangle N-$$ `÷`
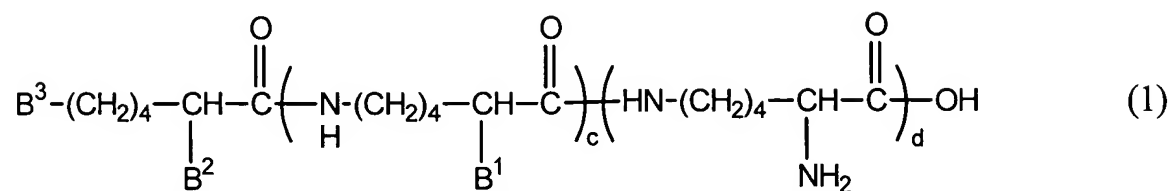
6.   **(Withdrawn)** A process for production of silicone-modified ε-polylysine represented by formula (1), obtained by reacting ε-polylysine represented by the following formula (4) with a

4

polyorganosiloxane having a functional group which can react with the amino groups of ε-
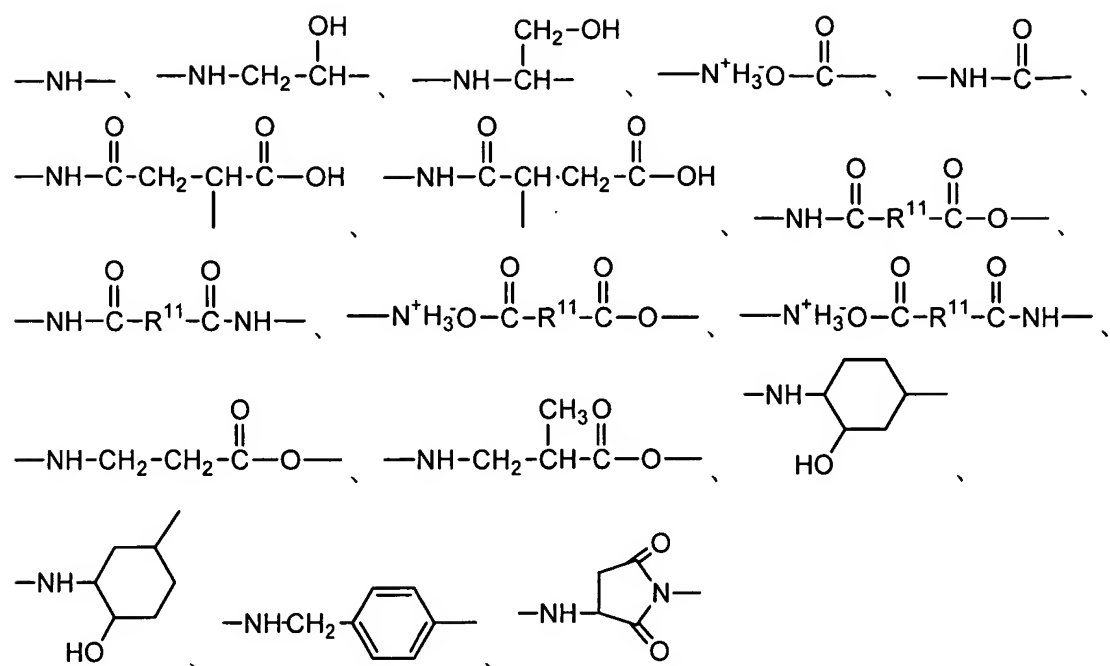
polylysine.

$$H-\left(NH-CH_2 \cdot CH_2 \cdot CH_2 \cdot CH_2 - \underset{\underset{NH_2}{|}}{CH} - \overset{\overset{O}{\|}}{C}\right)_n OH \qquad (4)$$

wherein n is a integer of 2 to 50.

$$B^3-(CH_2)_4-\underset{\underset{B^2}{|}}{CH}-\overset{\overset{O}{\|}}{C}\left(\underset{H}{N}-(CH_2)_4-\underset{\underset{B^1}{|}}{CH}-\overset{\overset{O}{\|}}{C}\right)_c\left(HN-(CH_2)_4-\underset{\underset{NH_2}{|}}{CH}-\overset{\overset{O}{\|}}{C}\right)_d OH \qquad (1)$$
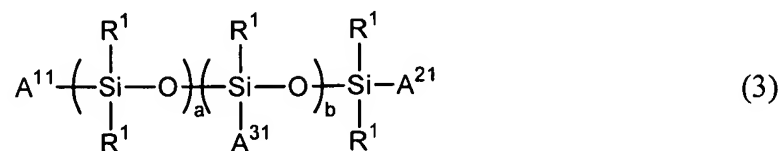
wherein B^1, B^2 and B^3 are groups represented by general formula (2) below or amino groups,

and at least one thereof is a group represented by formula (2), c is an integer of 0 to 50, d is an

integer of 0 to 50, and c + d is an integer of 1 to 50.

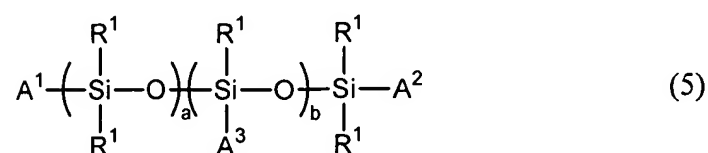-D-Y-Q (2)

wherein D is a group represented by:

5

$$-NH-, \quad -NH-CH_2-\overset{\overset{\displaystyle OH}{|}}{CH}-, \quad -NH-\overset{\overset{\displaystyle CH_2-OH}{|}}{CH}-, \quad -N^+H_3O-\overset{\overset{\displaystyle O}{\|}}{C}-, \quad -NH-\overset{\overset{\displaystyle O}{\|}}{C}-,$$

$$-NH-\overset{\overset{\displaystyle O}{\|}}{C}-CH_2-\overset{\underset{\displaystyle |}{\overset{\displaystyle O}{\|}}}{CH}-C-OH \quad -NH-\overset{\overset{\displaystyle O}{\|}}{C}-\overset{\underset{\displaystyle |}{}}{CH}\cdot CH_2-\overset{\overset{\displaystyle O}{\|}}{C}-OH \quad , \quad -NH-\overset{\overset{\displaystyle O}{\|}}{C}-R^{11}-\overset{\overset{\displaystyle O}{\|}}{C}-O-,$$

$$-NH-\overset{\overset{\displaystyle O}{\|}}{C}-R^{11}-\overset{\overset{\displaystyle O}{\|}}{C}-NH-, \quad -N^+H_3O-\overset{\overset{\displaystyle O}{\|}}{C}-R^{11}-\overset{\overset{\displaystyle O}{\|}}{C}-O-, \quad -N^+H_3O-\overset{\overset{\displaystyle O}{\|}}{C}-R^{11}-\overset{\overset{\displaystyle O}{\|}}{C}-NH-,$$

$$-NH-CH_2-CH_2-\overset{\overset{\displaystyle O}{\|}}{C}-O-, \quad -NH-CH_2-\overset{\overset{\displaystyle CH_3}{|}}{CH}-\overset{\overset{\displaystyle O}{\|}}{C}-O-,$$

(structures: -NH-cyclohexyl(HO) rings, -NHCH₂-phenyl-, -NH-succinimide)

wherein R^{11} is C1-5 linear or branched alkylene, C2-5 alkenylene or C6-10 arylene), and Y is C1-1000 linear or branched alkylene, of which any mutually non-adjacent methylenes may be substituted with -O-, and Q is a polyorganosiloxane group represented by the following formula (3):

$$A^{11}\!\!\left(\!\!\overset{\overset{\displaystyle R^1}{|}}{\underset{\underset{\displaystyle R^1}{|}}{Si}}\!-\!O\!\!\right)_{\!a}\!\!\left(\!\!\overset{\overset{\displaystyle R^1}{|}}{\underset{\underset{\displaystyle A^{31}}{|}}{Si}}\!-\!O\!\!\right)_{\!b}\!\!\overset{\overset{\displaystyle R^1}{|}}{\underset{\underset{\displaystyle R^1}{|}}{Si}}\!-\!A^{21} \qquad (3)$$

wherein each R^1 is independently C1-20 alkyl or C6-10 aryl, a is an integer of 0 to 1000, b is an integer of 0 to 1000, a + b is an integer of 1 to 1000, and A^{11}, A^{21} and A^{31} are independently R^1, a monovalent residue which is a compound represented by formula (1) with Q removed, or a single bond, with one thereof being a single bond.

7. **(Withdrawn)** A process for production of silicone-modified ε-polylysine according to claim 6, wherein the polyorganosiloxane having a functional group which can react with the amino groups of ε-polylysine is a polyorganosiloxane with an epoxy group.

8. **(Withdrawn)** A process for production of silicone-modified ε-polylysine according to claim 6, wherein the polyorganosiloxane having a functional group which can react with the amino groups of ε-polylysine is a polyorganosiloxane with carboxylic acid or a carboxylic acid derivative as the functional group.

9. **(Withdrawn)** A process for production of silicone-modified ε-polylysine according to claim 6, wherein the polyorganosiloxane having a functional group which can react with the amino groups of ε-polylysine is a polyorganosiloxane with a halogenated alkyl group.

10. **(Withdrawn)** A process for production of silicone-modified ε-polylysine according to claim 6, wherein the polyorganosiloxane having a functional group which can react with the amino groups of ε-polylysine is a polyorganosiloxane with an unsaturated group.

11. **(Withdrawn)** An antimicrobial agent comprising an amino group-containing antimicrobial polymer having a polyorganosiloxane group introduced into the molecule (the polymer being hereinafter referred to as "silicone-modified antimicrobial polymer" and the antimicrobial agent being hereinafter referred to as "silicone-modified antimicrobial agent").
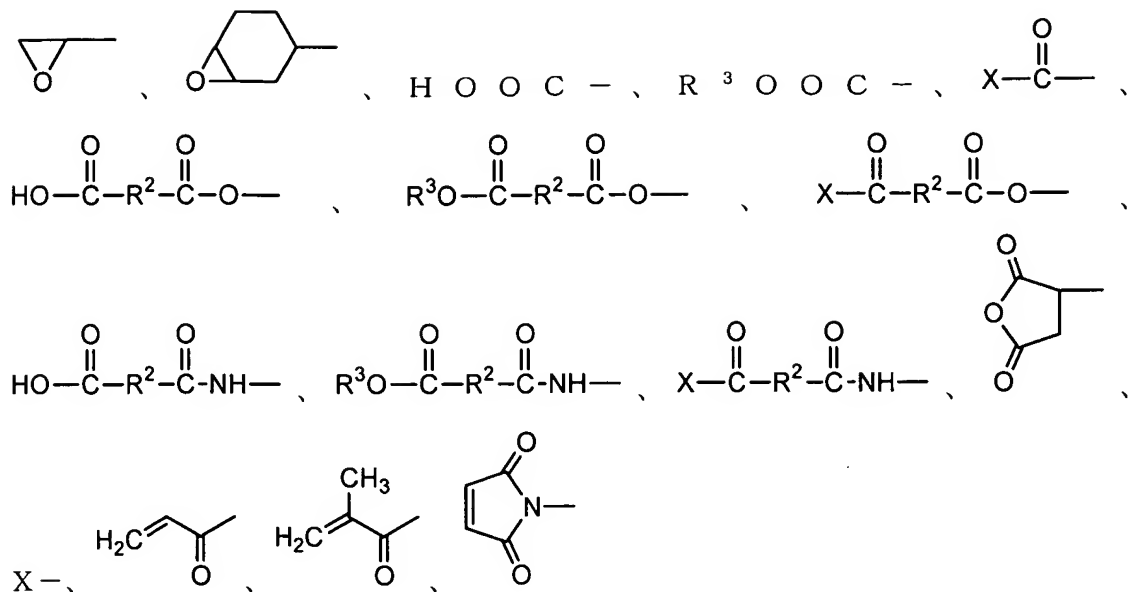
12. **(Withdrawn)** A silicone-modified antimicrobial agent according to claim 11, wherein the silicone-modified antimicrobial polymer is a polymer obtained by reacting an amino group-containing antimicrobial polymer and a polyorganosiloxane having a functional group which can react with amino groups, represented by formula (5) below.

$$A^1 \left(\underset{\underset{R^1}{|}}{\overset{\overset{R^1}{|}}{Si}} - O \right)_a \left(\underset{\underset{A^3}{|}}{\overset{\overset{R^1}{|}}{Si}} - O \right)_b \underset{\underset{R^1}{|}}{\overset{\overset{R^1}{|}}{Si}} - A^2 \qquad (5)$$

wherein R^1 is C1-20 alkyl or C6-10 aryl, a is an integer of 0 to 1000, b is an integer of 0 to 1000, a + b is an integer of 1 to 1000, A^1, A^2 and A^3 are each a group represented by formula (6) below, C1-20 alkyl or C6-10 aryl, and at least one among A^1, A^2 and A^3 is a group represented by formula (6),

-Y-Z   (6)

wherein Y represents C1-1000 alkylene, of which any mutually non-adjacent methylenes may be substituted with -O-, and Z is one of the following groups.
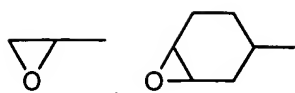
wherein R^2 is C1-5 alkylene, C2-5 alkenylene or C6-10 arylene, R^3 is C1-20 alkyl, C6-10 aryl or trimethylsilyl, and X is chlorine, bromine or iodine.

13 **(Withdrawn)** A silicone-modified antimicrobial agent according to claim 12, wherein the amino group-containing antimicrobial polymer is ε-polylysine.
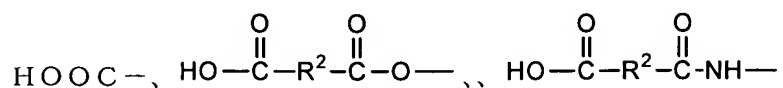
14 **(Withdrawn)** A silicone-modified antimicrobial agent according to claim 12, wherein Z in formula (6) is one of the following groups.
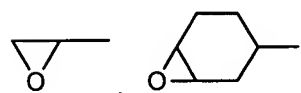
15 **(Withdrawn)** A silicone-modified antimicrobial agent according to claim 13, wherein Z in formula (6) is one of the following groups.
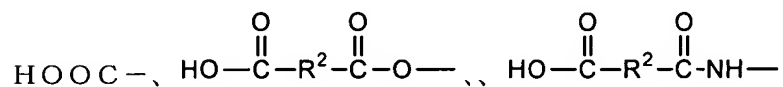
16. **(Withdrawn)** A silicone-modified antimicrobial agent according to claim 12, wherein Z in formula (6) is one of the following groups.
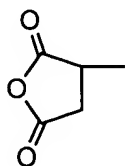
$$HOOC-, \quad HO-\overset{O}{\underset{\|}{C}}-R^2-\overset{O}{\underset{\|}{C}}-O-, \quad HO-\overset{O}{\underset{\|}{C}}-R^2-\overset{O}{\underset{\|}{C}}-NH-$$

wherein R^2 is C1-5 alkylene, C2-5 alkenylene or C6-10 arylene.

17. **(Withdrawn)** A silicone-modified antimicrobial agent according to claim 13, wherein Z in formula (6) is one of the following groups.

$$HOOC-, \quad HO-\overset{O}{\underset{\|}{C}}-R^2-\overset{O}{\underset{\|}{C}}-O-, \quad HO-\overset{O}{\underset{\|}{C}}-R^2-\overset{O}{\underset{\|}{C}}-NH-$$
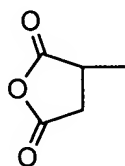
wherein R^2 is C1-5 alkylene, C2-5 alkenylene or C6-10 arylene.

18. **(Withdrawn)** A silicone-modified antimicrobial agent according to claim 12, wherein Z in formula (6) is one of the following groups.

$$R^3OOC-\quad,\quad X-\overset{O}{\underset{\|}{C}}-\quad,\quad R^3O-\overset{O}{\underset{\|}{C}}-R^2-\overset{O}{\underset{\|}{C}}-O-\quad,\quad X-\overset{O}{\underset{\|}{C}}-R^2-\overset{O}{\underset{\|}{C}}-O-\quad,$$

$$R^3O-\overset{O}{\underset{\|}{C}}-R^2-\overset{O}{\underset{\|}{C}}-NH-\quad,\quad X-\overset{O}{\underset{\|}{C}}-R^2-\overset{O}{\underset{\|}{C}}-NH-\quad,$$

wherein R^2 is C1-5 alkylene, C2-5 alkenylene or C6-10 arylene, R^3 is C1-20 alkyl, C6-10 aryl or trimethylsilyl, and X is chlorine, bromine or iodine.

19. **(Withdrawn)** A silicone-modified antimicrobial agent according to claim 13, wherein Z in formula (6) is one of the following groups.

$$R^3OOC-\quad,\quad X-\overset{O}{\underset{\|}{C}}-\quad,\quad R^3O-\overset{O}{\underset{\|}{C}}-R^2-\overset{O}{\underset{\|}{C}}-O-\quad,\quad X-\overset{O}{\underset{\|}{C}}-R^2-\overset{O}{\underset{\|}{C}}-O-\quad,$$

$$R^3O-\overset{O}{\underset{\|}{C}}-R^2-\overset{O}{\underset{\|}{C}}-NH-\quad,\quad X-\overset{O}{\underset{\|}{C}}-R^2-\overset{O}{\underset{\|}{C}}-NH-\quad,$$

wherein R^2 is C1-5 alkylene, C2-5 alkenylene or C6-10 arylene, R^3 is C1-20 alkyl, C6-10 aryl or trimethylsilyl, and X is chlorine, bromine or iodine.

20. **(Withdrawn)** A silicone-modified antimicrobial agent according to claim 12, wherein Z in formula (6) is chlorine, bromine or iodine.

21. **(Withdrawn)** A silicone-modified antimicrobial agent according to claim 13, wherein Z in

formula (6) is chlorine, bromine or iodine.

22. **(Withdrawn)** A silicone-modified antimicrobial agent according to claim 12, wherein Z in

formula (6) is one of the following groups.
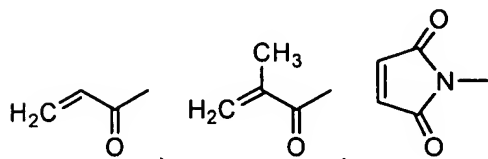
23. **(Withdrawn)** A silicone-modified antimicrobial agent according to claim 13, wherein Z in

formula (6) is one of the following groups.
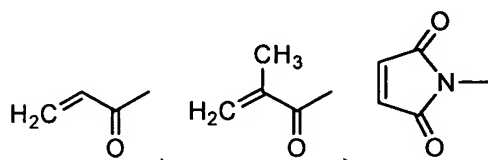
24. **(Withdrawn)** An antimicrobial agent according to claim 12, wherein the residual ratio of

the number of amino groups of the amino group-containing antimicrobial polymer is 10-99%.

25. **(Withdrawn)** An antimicrobial resin composition comprising an antimicrobial agent

according to claim 11 and a resin.

26. **(Withdrawn)** An antimicrobial resin composition according to claim 25, wherein the resin

is a synthetic resin.

27. **(Withdrawn)** An antimicrobial resin composition according to claim 26, wherein the synthetic resin is a vinyl-based polymer.

28. **(Withdrawn)** An antimicrobial resin composition according to claim 26, wherein the synthetic resin is a polyolefin-based resin.

29. **(Withdrawn)** An antimicrobial resin composition according to claim 26, wherein the synthetic resin is a silicone-based resin.

30. **(Withdrawn)** An antimicrobial resin composition according to claim 26, wherein the synthetic resin is an acrylic resin.

31. **(Withdrawn)** An antimicrobial resin composition according to claim 26, wherein the synthetic resin is an epoxy resin.